

MEETING AGENDA & PATH-FORWARD PLANNING

OCTOBER 7, 2003 PROJECT MEETING ~ L. E. Carpenter & Company, Wharton, New Jersey

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I INTRODUCTIONS & PURPOSE

Remediation of the L. E. Carpenter (LEC) site is complicated by two major types of contamination that were environmental risk drivers addressed in the 1994 Record of Decision (ROD). The predominant drivers consist of a residual source of organic compounds in the form of DEHP and xylenes, in both free product and dissolved phases, and lead-impacted soils that are superposed on top of part of the free-product source area. Since the signing of the ROD, LEC has been proactive in seeking the completion of the required remedial actions at the site to eliminate these environmental risks. In an effort to comply with the intent of the ROD, LEC has performed significant investigative and remedial activities such as:

1. Past and ongoing removal of significant volumes of free product (*i.e.*, passive recovery, pneumatic system recovery, and enhanced fluid recovery EFR)).
2. Numerous additional site investigations over an eight-year period, including independent studies that have delineated the extent of lead-impacted soils, shown groundwater contamination consists only of organic compounds (no lead), is limited in extent, and is not migrating due to natural attenuation.
3. Proposed changes to the ROD-prescribed remediation approach for lead-impacted soils as a result of more accurate site-specific data.



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4. Proposed changes to replace the current free product remediation system with a more robust approach that will both remove a larger volume of product and expedite its recovery.

The most recent activity was the submittal in February 2003 of a Focused Feasibility Study (FFS) to address lead-impacted soil as part of a plan to more aggressively remove the source of free-product contamination. Because the lead impacted soils are superposed over part of the free product area, it is necessary to first reach a consensus on the method for addressing the lead soils before the proposed remedial action for the free product can take place. Comments from the USEPA and the New Jersey Department of Environmental Protection (NJDEP) regarding that FFS were included in a letter from NJDEP to LEC dated July 3, 2003.

LEC wants to utilize the October 7, 2003 meeting to discuss the principal issues addressed in those FFS comments that critically affect the selection of an alternative, and to find the best means of resolving those issues such that a clear path forward to meet all of the objectives of the ROD can be agreed upon.

II BACKGROUND

A brief summary of the major components of the ROD-required actions and the status of those actions is useful in evaluating an appropriate path forward. The principal elements of remediation outlined in the ROD included:

- Removal of Free-product
- Following removal of free product; groundwater extraction, treatment and re-infiltration/injection of treated water in both shallow and deep hydrogeologic zones
- Excavation and consolidation of organic (VOCs and SVOCs) contaminated hot spot soils into an augmented treatment zone for treatment via soil washing with treated groundwater effluent
- Spot Excavation and off-site disposal of soils exceeding cleanup criteria for lead, antimony and PCBs
- Environmental Use Restrictions

LEC's efforts to meet the requirements of these remediation elements have resulted in the following findings:

- (1) Although a significant amount of free product had been extracted to date, the remaining product is not easily removable, given the limited suite of remediation technologies available and practicable within the site's hydrogeologic setting, and the physical characteristics (DEHP viscosity) of the product.
- (2) A pilot test showed that extraction, treatment and re-infiltration of organic-contaminated groundwater, as well as on-site treatment of DEHP contaminated soils, were not technically feasible.

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- (3) Studies have shown that organic contaminated groundwater is significantly limited in extent, and is not actively migrating due to natural attenuation. .
- (4) Lead-impacted soils exceeding the ROD-mandated 600 ppm clean up criteria are more extensive on site than was known at the time the ROD was written.
- (5) Lead-impacted soils exposed to the elements for more than 20 years have not resulted in any lead-impacts to groundwater.
- (6) SPLP testing of lead-impacted soils show that these soils will not release lead to the groundwater as a function of rainfall infiltration and leaching.

Reports documenting remediation attempts and additional investigations to better define site conditions have been prepared and submitted. Attempts to address and resolve the first two findings relating to DEHP and xylene contamination culminated in the submittal of the RMT final report entitled *Findings & Recommendations Regarding a Conceptual Free-Product Remediation Strategy* (March 2002) ("the conceptual plan"). Further evaluation of the third finding is currently on hold pending free product and lead soils remedial options approval and implementation. However, NJDEP and USEPA has provided approval of the document entitled *Workplan for Supplemental Investigation of Natural Attenuation of Dissolved Constituents in Groundwater* (RMT, May 2001) ("the MNA workplan") and Responses to August 23, 2001 NJDEP comment Letter outlined in the *Addendum for the Workplan for Supplemental Investigation of Natural Attenuation of Dissolved Constituents in Groundwater* in their letter dated January 24, 2002. The forth, fifth and sixth findings have been addressed by submitting a report that defined the extent of lead-impacted soils in a report titled *Nature and Extent of Lead in Soils and Groundwater Vol(s). I & II* (March 2002). At that time, discussions were initiated with the Borough of Wharton regarding a potential end-use plan involving use of the remediated portion of the site (east of the rails to trails path) as a municipal park. Also at that time LEC indicated it was prepared to meet a schedule approved by NJDEP for a June 2002 submittal of a Remedial Action Work Plan (RAWP) to implement full-scale remediation of the contaminant sources during the summer of 2002.

Agency comments on the March 2002 reports were received by LEC in August 2002. LEC then requested a meeting with NJDEP and USEPA to answer specific questions and to resolve any lingering issues concerning the conceptual remediation plan so that it would be clear exactly what documents and information would be necessary to move forward with the planned remedial actions. A meeting was then held on September 19, 2002 at the USEPA offices in Edison New Jersey. The discussions held and agreements made at this meeting were memorialized along with formal responses to agency comments in RMT's October 22, 2002 letter. The principal results of the September 19, 2002 meeting are summarized as follows:

- (1) NJDEP and USEPA were supportive of the proposed "aggressive" approach to remediation of the free-product source outlined in the conceptual plan.

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- (2) NJDEP and USEPA were supportive of the approach to leave lead-impacted soils on-site, except a question remained regarding whether implementation of the proposed approach represented a significant change to the ROD requiring modification of the existing ROD via an Explanation of Significant Difference (ESD) or a fundamental change to the ROD remedy requiring modification of the existing ROD via a ROD Amendment.
- (3) The first step in implementing the conceptual remediation plans would be to prepare an FFS to evaluate and compare off-site disposal versus on-site beneficial reuse of the lead-impacted soils. As part of that effort, LEC would also evaluate the feasibility of lowering the cleanup criterion for lead from 600 ppm to 400 ppm.
- (4) The FFS would be followed by preparation of a detailed RAWP that provided all of the specifications on the lead and free product remediation.
- (5) Following remediation of the lead and free product, LEC would implement the previously approved MNA work plan, and if MNA was further verified as a viable remedial option, submit a final MNA report to support regulatory development of a ROD Amendment and subsequent change in the existing ROD remedy to address dissolved-phase contamination in groundwater (*i.e.*, Groundwater extraction, treatment and re-infiltration/injection of treated water in both shallow and deep hydrogeologic zones).

LEC then completed the FFS, focusing on the critical issues and agreements developed from the September 19, 2002 meeting. As required, LEC submitted this document to both the NJDEP and USEPA for review on February 28, 2003. The agencies provided comments on the FFS in a NJDEP letter dated July 3, 2003.

III LEC OPTIONS AND MEETING OBJECTIVES

LEC desires to leave this meeting with a clear consensus from all parties as to the necessary elements to support a firm decision on a remediation path forward with respect to the lead-impacted soils. These objectives include arrival at determinations and/or confirmation by NJDEP and USEPA of the following:

- Concurrence that the conceptual free-product strategy has the support of the NJDEP and the USEPA as a more "aggressive" remedial approach, and that this proposed action does not represent either a simple, significant or fundamental change to the existing ROD remedy for free product and that the free-product remediation approach can be advanced into the RAWP phase without any additional studies (*i.e.*, feasibility studies). Regardless of how the lead-impacted soil issues are resolved.
- Determination that an amendment to the ROD, if MNA and/or another option to augment MNA are proposed as an alternative to pump and treat, will be submitted after source reduction has taken place (*i.e.*, lead soil and free product).

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- A clear statement of the design criteria and conditions that will be required for on-site re-use of lead-impacted soils, for both recreational and industrial/commercial end use plans including specific design criteria for soil cover/cap and separation from the water table assuming USEPA insists on such requirements.

IV APPROACH TO DISCUSSIONS ON COMMENTS

To achieve the objectives outlined above, and provide the structure required to constructively discuss the issues arising from regulatory (USEPA and NJDEP) review comments within the limited time provided by this meeting, we have organized and summarized issues into specific categories and topics cross-referenced these with the regulatory comments as shown in Table 1. General responses to these comments are presented below in the order shown in the table as a basis for the proposed discussions in this meeting. To facilitate successful completion of the meeting, the full comments have not been included other than by reference to the comment number.

Table 1
Categorical Summary of Regulatory Comments

ISSUE	NJDEP Comment No.	USEPA Comment No.
ROD Issues		
ROD changes and Justifications		1,4
LNAPL Plan issues		1,7
Clean-up criteria		8,15,16
O&M and Cost Issues	3	1, 11, 22
Remedial Action Plan Issues		
End-use plan		17,18,19
Hydrology, Cap and cover design		6
Remedial Action Plan contents		10
Soil/Waste Handling Issues		
Stock Pile and soil handling	1	13, 24
Lead-Impacted Soil Extent and Volume		5, 23
Lead and PCB Hot Spot Remediation		1, 2
Sampling and Monitoring Issues	2,4	1,3,9,11,12
Survey and Assessment Issues		
Eco-Risk Assessment		14
Historic surveys		25
Wetlands		1, 26
Floodplains		26
Endangered species		26
Other Issues		20,21

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IV.1 Issues

IV.1.1 ROD Changes and Justifications

Discussion

LEC concurs that proposed handling of Category C and D soils will not be treated differently than prescribed in the ROD (*USEPA Comment 1, ¶s 1-5*). However, LEC wishes to clarify that Category B materials (process wastes > 6,500 – 7,500 ppm lead) were not specifically identified as waste streams in the existing ROD. As such management of these material does not pose a change to the existing ROD regardless of what alternative is agreed upon as appropriate.

LEC assumes that the increase in off-site disposal volumes alone does not demonstrate a significant change in the ROD given *USEPA Comment 4*.

The categories supporting USEPA's determination of a fundamental change in the ROD remedy that requires a full ROD amendment (*USEPA Comment 1, ¶ 6*) consist of presumed changes in the hazardous waste management approach, an altered remedial scope, and long-term effectiveness of the current remedy regarding lead soils. LEC would like to stress that the hazardous waste management approach for the site has not been altered because the lead soils >400 and up to 3,000 ppm (Category A material) have not been shown to be hazardous, and the only hazardous waste stream (Category B materials), as previously stated, was not identified in the original ROD and therefore does not represent either a significant or fundamental change. In addition, LEC believes that while the scope has changed, the long-term effectiveness of the on-site re-use remedy is not significantly different than the off-site disposal alternative. Finally, the major difference between an FFS prepared to support an ESD versus a ROD Amendment is the requirement to utilize the nine Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) criteria to compare alternatives. Although evaluations prepared to support an ESD are not required to use the nine CERCLA criteria, as agreed at the Sept 19, 2002 meeting LEC utilized the nine criteria so as to provide enough detail to support the ESD regardless as to whether the ROD was to be modified via and ESD or Amendment.

Summary

- ❑ LEC believes that the proposed remediation represents a significant change to the existing ROD remedy, subsequently the existing ROD remedy for lead soils would more appropriately be modified using an ESD.

Requested Clarification

- ❑ We request USEPA provide justification that the proposed on site reuse alternative represents a fundamental change to the existing ROD.

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IV.1.2 LNAPL Issues

Discussion

As stated in a number of previous documents, and as previously agreed to by USEPA, the recommended Conceptual Free-Product Remediation Strategy is more aggressive than what had been proposed in the ROD (*USEPA Comment 1, ¶ 10*) in that the ROD does not address free product removal with any specificity, and simply states that "(groundwater) treatment will occur after all immiscible product has been removed through an active removal system". The current active removal methodology (enhanced fluid recovery or EFR) continues to successfully remove product; however, following implementation of EFR and completion of a free product volume analysis study (RMT, May 2000), it was shown this method is taking longer than was deemed acceptable to NJDEP. Subsequently, LEC prepared the conceptual plan in March 2002, which both NJDEP and USEPA strongly supports (USEPA comment #7). However, as agreed to during the September 19, 2003 meeting, the detailed design for that plan would be submitted in a RAWP, following acceptance of the lead FFS. It is important to note that the LNAPL plan is independent of both FFS Alternatives 1 and 2, is supportive of both, does not affect the evaluation of either alternative, and as previously agreed to during the September 19, 2002 meeting with the USEPA does not represent a change to the existing ROD. Therefore, a comparison between the current active methods of removing free product with the proposed LNAPL plan is not required in the FFS for lead-soils. As agreed to previously by USEPA, because of the spatial relationship (geographic distribution) between lead-impacted soils and free product, the design plan portion of the RAWP cannot be prepared until an approval is made on the disposition of lead-impacted soils.

Summary

- ❑ The free-product remediation strategy is both independent and supportive of FFS Alternatives 1 and 2, and does not affect the evaluation of either alternative.
- ❑ The free-product remediation strategy does not represent a change to the existing ROD therefore no comparison between LNAPL recovery methods is required in the lead FFS.
- ❑ Due to the spatial relationship (geographic distribution) between lead-impacted soils and free product, the design plan portion of the RAWP cannot be prepared until an agreement is reached regarding the disposition of lead-impacted soils.
- ❑ A detailed plan/design for LNAPL recovery will be outlined in the RAWP.

Requested Clarification

- ❑ We request EPA provide feedback if necessary, regarding the above discussion.

IV.1.3 Cleanup Criteria

Discussion

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LEC has proposed a remediation goal of 400 mg/kg assuming an end use as a municipal park. However, LEC has currently not reached agreement with the Borough of Wharton on an end-use and property transfer plan (*USEPA Comment 8*). LEC reserves the right to maintain the 600 mg/kg (ppm) lead criterion outlined in the existing ROD for industrial/commercial use should a final plan with the Borough not be attainable. Regardless of how this 600-ppm criterion for lead was selected (*USEPA Comment 16*), it is the ROD mandated goal, while 400 ppm is the New Jersey residential cleanup standard for lead in soils. LEC recognizes the flexibility in designing an end-use plan that meets 400-mg/kg criterion and will strongly consider that in preparing the final recommended design.

Note also that there are precedents for leaving soils in excess of the 400 and 600-ppm lead criterion on site as backfill (*USEPA Comment 15*), provided appropriate engineering and institutional controls are in place to remove any potential direct contact risks (*i.e.*, inhalation and/or ingestion). In addition, data show this material does not leach, however USEPA apparently believes that leachability issues still exist based on their comments (*USEPA Comments #1-#8, #6, #12, and #15*). Therefore, LEC desires input from USEPA and NJDEP as to what the approvable design standards for capping of this material would be (*USEPA Comment 6*).

LEC acknowledged that the IEUBK model evaluated exposure potential through various pathways as outlined in Section 4.7.2 of the FFS.

Requested Clarification

- ☐ USEPA apparently believes a potential leachability risk exists. LEC requests that USEPA provide an explanation and justification for this belief.
- ☐ Input is requested from USEPA and NJDEP as to what would be the approvable design standards for on-site re-use of this material (e.g., liners; caps; etc.).

IV.2 O&M Issues and Cost Issues

Discussion

LEC disagrees with the general comments (*NJDEP No. 3 and USEPA Nos. 1, 11 and 12*) regarding inclusion of O&M costs. The approach RMT used ignored O&M costs, because we believed those costs would be nearly identical, regardless of the Alternative selected. The majority of maintenance costs associated with the conceptual end use plan (*i.e.*, municipal park) would be general park related upkeep activities (*i.e.*, asphalt path repairs, recreational surface repairs, lawn care etc). There would be an identified and surveyed deed restricted area for where the lead soils were buried. Site groundwater monitoring and O&M associated with municipal park upkeep would be identical and therefore were considered moot during the FFS alternative evaluation. In addition, future groundwater monitoring would continue to focus on organic analytes because data show that the lead soils, which have been exposed to the

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elements for more than 20 years are not capable of producing detectable lead concentrations in groundwater as a function of rainfall infiltration and leaching.

It is agreed that with the addition of other design capping requirements to Alternative 2 (*i.e.*, liner, material permeability and compaction etc.), being required by USEPA, O&M costs could vary significantly between alternatives. LEC believes these additional capping design requirements are unnecessary. It should also be noted that the cost comparison utilized was considered conservative in that Alternative 1 considered off-site disposal costs for lead-impacted soils that were moderate to low. For instance, a \$50/cy increase in disposal costs would increase the cost of Alternative 1 by \$500,000. As outlined in the objectives, LEC would like to discuss the rationale behind the use of specific cap design requirements at the site, and a clear outline of both cap design and subsequent O&M requirements that are acceptable to USEPA. As a result, LEC can more accurately calculate estimated costs for comparison between each lead soil alternative.

Summary

- ❑ LEC ignored O&M costs in the analysis of alternatives because those costs will be nearly identical regardless of the Alternative selected (*i.e.*, repairs, monitoring).
- ❑ The cost comparison utilized was considered conservative in that Alternative 1 considered off-site disposal costs for lead-impacted soils that were moderate to low.

Requested Clarification

- ❑ LEC requests that USEPA outline and justify additional O&M requirements that appears to be required by USEPA for the material reuse alternative even given lack of data supporting leaching.

IV.3 Remedial Plan Issues

IV.3.1 End-Use Plan

Discussion

Again, it should be noted that LEC has not reached agreement on an end-use plan with the Borough of Wharton (*USEPA Comment 17*). Regardless, the end use plan presented is exactly what is intended by a "conceptual" end use plan. A "credible design" is not necessary in this case because data show the lead-impacted soils that were proposed to be left on-site do not leach, and therefore there is no need for a "designed" cover or cap. The "hard" structures proposed in the "conceptual" end use plan were not proposed to provide added protection for the lead soils to prevent potential leaching. The lead soils do not leach as shown by SPLP analysis and over 20 years of exposure to the elements. They were added to show the Borough possible recreational end uses that would technically be acceptable for them to implement following completion of LEC's proposed remedial action. The "hard" structures (*i.e.*, tennis courts, basket ball courts, roller/hockey rink) should not be viewed as a requirement of the remedial design, but

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rather as a beneficial synergy developed by LEC and the Borough during remedial and end use discussions.

However, in the event that EPA insists that some type of engineering controls would be required to prevent infiltration (despite available data that shows the lead soils do not leach), then the conceptual design shows that municipal recreation activities and centers are compatible with and could be established within the framework of such a remediation approach, including placement of paved surfaces (*i.e.*, tennis & basketball courts) over the area proposed for backfilling with lead impacted soils. The purpose of the conceptual plan is to provide an example for the Municipality so that it can develop and install its' own end use design, once the Alternative and RAWP are approved, and the remediation completed. The grading plans provided for Alternatives 1 and 2 were preliminary designs to accomplish the remediation goals in a manner that would maximize the flexibility for potential future use within the municipality's recreational designs for the site. The plan as shown in Figure 4 emphasizes the proposed recreational use of the remediation area (*USEPA Comment 18*). The Borough wishes to develop the area west of the remediation area with mixed uses including a new street and other municipal use structures. Regardless of the actual end-use, LEC should be able to reserve a design within the propose remediation strategy that calls simply for a grassed open space.

Summary

- ☐ Proposed conceptualized hard structures were incorporated into the conceptual design as a beneficial development synergy, not to reduce environmental or human health risk.

Requested Clarification

- ☐ We request EPA provide feedback if necessary, regarding the above discussion.

IV.3.2 Hydrology, Cap and Cover Design

Discussion

LEC's current plans are to retain the greater than 2.5-inch fraction for use as backfill. (*USEPA Comment 6*). The issues relating to coarse backfill and hydrology of the site need further illumination. The site is already underlain by extremely coarse granular material, so "importing additional fine-grained fill" is unnecessary. Groundwater levels are largely controlled by precipitation and infiltration, and the elevation of the Rockaway River and Washington Forge Pond. The Rockaway River and precipitation also control the hydrology of any local wetlands. In addition, the native coarse granular material provides a "wide-open" hydraulic system, and for all of these reasons, groundwater controls are not feasible at this site. In fact, the intent of the free-product strategy is to expose the hydraulic system to the atmosphere in order to enhance recovery of the product. During the September 19, 2002 meeting, LEC clarified to both

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USEPA and NJDEP that synthetic liners were not needed because these soils have been shown to not result in solution and mobilization of lead (no leaching according to both groundwater testing and SPLP testing of lead-impacted soils). Nevertheless, LEC agreed at that meeting to place lead-impacted backfill well above the recorded seasonally high water table to eliminate USEPA's perceived need for "bottom" containment. In order to move forward with this project, and assuming lead-impacted soils are to be re-used as backfill on-site, LEC needs to obtain an agency decision that is dependable (will not change upon re-submittal of the FFS and submittal of the RAWP) as to what water-to-waste separation criterion is acceptable to the USEPA. The design also calls for confining the lead-impacted soil fill to the higher central portion of the site to minimize the perceived need for a cap. Again, details of the design features would be presented in detail within the RAWP.

Summary

- ☐ Groundwater controls are not feasible during site remedial activities.
- ☐ LEC plans to expose the site hydraulic system to capture as much free flowing product as possible during excavation activities.
- ☐ Use of synthetic liners to reduce risk is not proposed. Previous discussions regarding the use of "plastic" or other liner material focused on the ability to identify deed-restricted areas after completion of the remediation.

Requested Clarification

- ☐ LEC requests EPA provide the technical justification and specifications for water-to-waste separation.

IV.3.3 Remedial Action Plan Contents

Discussion

Specific details including site control measures are assumed to be reserved for detailed presentation within the RAWP as was agreed during the September 19, 2003 meeting.

Requested Clarification - None Required

IV.4 Soil/Waste Handling Issues

IV.4.1 Stockpiling and Handling

Discussion

There is no available space for stockpiling or staging that is near the river or wetlands. (USEPA Comment No. 13). In addition, stockpiling lead soils near the wetlands identified to the far east of the site would not occur because 1) lead soils are not anticipated to extend that far east (Ref. Section 4.4.2 of the Lead Soil FFS), 2) plans to remedy the PCB impacted soils located at the far eastern portion of the property are proposed (Ref. Section 6.2.10 of the conceptual plan), and 3) subsequent wetland mitigation measures would be implemented if it is found necessary to extend the

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excavation into any wetland (Ref. Section 4.4.2 of the Lead Soil FFS). Current plans are to locate these elements north and northwest of the area to be remediated. LEC intends to stockpile any materials generated from the remediation as far from any site water feature as possible. Details on stockpiles and staging areas would be presented in the RAWP and are dependent on the resultant volumes of materials involved, and depend on the alternative selected. LEC will perform a remedial constructability analysis as part of the RAWP to resolve these and other issues related to equipment lay-down and stockpiling. It is also intended that stockpiles would be segregated depending on the nature of the material and testing to be performed prior to reuse or off-site disposition (*USEPA Comment No. 24 and NJDEP Comment No. 1*).

Summary

- ☐ Materials will not be proposed for stockpiling near any surface water features on or adjacent to the site.
- ☐ Stockpile management will be detailed within the Soil Erosion and Sediment Control (SESC) Plan proposed for incorporation in the RAWP.

Requested Clarification

- ☐ We request EPA provide feedback if necessary, regarding the above discussion.

IV.4.2 Lead-Impacted Soil Extent and Volume

Discussion

Figures 2 thru 4 of the report *Nature and Extent of Lead in Soils and Groundwater* (March 2002) and Figures 3 and 6 of the FFS define the extent of lead, as well as current and historic extent of lead hot spots (*USEPA Comment No. 23*). The planned elevations for excavation of Category A soils has been conservatively presented within the FFS to provide for excavation of all soils, "exposed" and otherwise, to the depths required that exceed the 400 and 600 ppm lead criteria (*USEPA Comment No. 24*). Investigations on the extent of lead clearly showed that identification and segregation of lead-impacted soil from waste could be made by visual observation. In fact, the Category B process wastes containing lead concentrations >6,500 ppm (planned to be handled as hazardous waste) were only recently identified precisely because they presented distinct textural and color characteristics. In addition those soils >600 ppm and < 3000 ppm are confined to characteristically dark colored fill material. Where necessary, and depending on the Alternative selected, segregated stockpiles would be tested prior to reuse, or for characterization for off-site disposal. Regardless of the Alternative selected, testing of soils within the excavation prior to backfill is necessary to assure the appropriate level of removal has been performed. A sampling plan outlining details of proposed post excavation sampling would be included within the RAWP.

To clarify the estimated volume of lead-impacted soils (*USEPA Comment No. 5*), the 7,700 cy yards of soils were estimated from results of the November 2001 lead

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investigation field work and "first-cut" estimates made and reported in *Findings & Recommendations Regarding a Conceptual Free-Product Remediation Strategy* (March 2002). These quantities were evaluated in more detail during the FFS resulting in a total of 7,388 CY (close to the earlier estimate of 7,700 cy) of impacted soil around Building 14 and an additional 2,024 cy required to remove all potential hot-spots outside of the general lead footprint around Building 14. An estimated volume of 778 CY of process-impacted waste was added to arrive at the total of 10,190 CY for disposal. Computation of these volumes is documented in Appendix C of the FFS.

The 1,400 CY estimate outlined in the 1994 ROD accounted for both inorganic and organic hot spots. The FFS only focused on costs associated with lead (inorganic) hot spots. As outlined in Table 1-1 of the Quarterly Progress Report - April 1995, the original workplan estimate for Hot Spots B and C were 30 CY and 67 CY respectively.

Summary

- ☐ Visual identification and mechanical segregation of lead-impacted soil from process waste will be adequate.
- ☐ Segregation of stockpiles is planned prior to reuse, or for characterization for off-site disposal.
- ☐ Post-excavation testing of soils within the excavation prior to backfilling is planned.
- ☐ Details on soil and post-excavation testing as well as final delineation of metals and organic-impacted soils for excavation will be presented in the RAWP.

Requested Clarification

- ☐ We request EPA provide feedback if necessary, regarding the above discussion.

IV.4.3 Lead and PCB Hot Spots

Discussion

As we have stated many times in the past, material from Hot Spots A, B, C & D are thought to be stockpiled on top of the demolition debris surrounding Bldg. 14. Subsequently, Hot Spots A, B, C & D remain open. Excavation of Hot Spots A & D is complete, while the excavation of Hot Spots B & C is not complete. PCB impacted soils located within the eastern side of the property remain in place. No excavation and/or management of these materials have been accomplished to date. As outlined in Section 6.2.10 of the conceptual plan, except for obvious concrete building debris, the PCB material is proposed for excavation and off-site disposal. (*USEPA Comment No., 2 ¶s 1 and 2*).

Requested Clarification- None

IV.5 Sampling and Monitoring Issues

Discussion

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LEC intends to include in the RAWP a detailed Sampling Plan outlining confirmation soil sampling and analysis to assure removal of lead-impacted soils to the appropriate levels from the excavation (*NJDEP Comment No. 2*).

The number of wells planned to be removed and abandoned (28 wells) is based on the fact that this is the apparent number of wells that lie within the footprint of the proposed remediation area. (*USEPA Comment No. 9*). LEC estimated that 10 monitoring wells would need to be reestablished, but that number and location would be best delineated during RAWP preparation.

LEC reported in *Nature and Extent of Lead in Soils and Groundwater* (March 2002) that lead concentrations in the groundwater at and adjacent to the LEC site do not exceed the Class II A New Jersey Groundwater Quality Criterion for lead of 10 µg/l (*NJDEP Comment No. 4 and USEPA Comments Nos. 3 and 12*). Given the 44 years of active industrial site use (1943 -1987), and the cessation of LEC operations 16 years ago, the lack of lead-impacts on the groundwater supports the idea that the soils with elevated concentrations of lead do not leach. Sufficient time has passed for any leaching to have occurred and yet there is no evidence for it. Therefore, LEC cannot concur with the need for monitoring groundwater for lead. In addition, as outlined in N.J.A.C 7:9-6.7, the actual Class IIA Groundwater standard for total lead is 5 ppb. The Practical Quantitation Level (PQL) is 10 ppb. LEC understands that NJDEP adopts the higher of the two values.

The measures anticipated to be contained within the Soil Erosion and Sedimentation Control (SESC) Plan, as required by the County, are intended to be conservative enough to prevent transport of contaminated sediment off site during and after construction (*USEPA Comment 11*). This plan will be presented as an attachment to the RAWP. Given the past history of exposed soils on site, measures provided during construction should vastly decrease the potential for off-site transport of soil and sediment from current conditions. In addition, it is LEC's intention to stockpile excavated materials as far from surface water bodies as possible. Therefore, LEC questions the need for on going monitoring of surface water and sediment as part of this SESC Plan.

Summary

- ☐ Lead concentrations in the groundwater at and adjacent to the LEC site do not exceed the Class II A New Jersey Groundwater Quality Criterion for lead of 10 µg/l
- ☐ Sufficient time (>60 years) has passed for any leaching to have occurred and yet there is no evidence for it.
- ☐ The immobility of lead at sites similar to this is well documented.
- ☐ The Soil Erosion and Sedimentation Control (SESC) Plan, as required by the County, should be conservative enough to prevent transport of lead-impacted sediment off site during and after construction. The SESC will be included with the RAWP.

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Requested Clarification

- ❑ If USEPA cannot concur with LEC's conclusions on the immobility of the lead, provide peer-reviewed technical support for its conclusions.
- ❑ Typically surface water monitoring to evaluate SESC best management practices (BMPs) is not required. Please provide examples and reasoning for this comment.

IV.6 Survey and Assessment Issues

IV.6.1 Eco-Risk Assessment

Discussion

LEC agrees that another ecological risk assessment is not necessary at this time (*USEPA Comment 14*). The original cleanup level in the ROD was based on "the understanding that receptors were protected with levels of lead remaining on site below 600 ppmwithout any engineering controls." This fact was discussed and agreed to at the September 19, 2002 meeting. Therefore, LEC will not conduct an additional ecological risk assessment if the remedial cleanup level were to increase back up to 600 ppm for lead in soils.

In addition, LEC has provided conceptual design plans that clearly show that any lead soils left on site would not be placed near any wetlands or the Rockaway River. Therefore, the basis by which EPA would require an additional ecological risk assessment is unclear.

Requested Clarification

- ❑ Explain why additional ecological risk assessment would be required if soils were excavated to 600 ppm vs. 400 ppm.
- ❑ Explain what the basis would be for requiring any additional ecological risk assessment (i.e., define what the agency means by "directly impact or alter portions of the wetlands or Rockaway River).

IV.6.2 Stage 1B CRS

Discussion

As outlined in Section 4.6.4 of the FFS, LEC agrees to conduct a Stage 1B Cultural Resource Survey (CRS) as part of the RAWP.

Requested Clarification- None

IV.6.3 Wetlands Survey

Discussion

FFS Figures 5 and 7 show that the current extent and proposed excavation of lead-impacted soils lies well outside of the boundaries of the designated wetland area. Subsequently, wetland issues were not included as part of the FFS evaluation.

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Excavation of free-product contaminated soil is anticipated to be limited to the area west of the wetland boundary on Wharton enterprises property. As agreed during the September 19, 2002 meeting, if the final design calls for excavation into this wetland, this would be addressed under a Wetland Mitigation plan and presented as an attachment to the RAWP.

Requested Clarification

- ☐ We request EPA provide feedback if necessary, regarding the above discussion.

IV.6.4 Floodplains

Discussion

A floodplain assessment was included in the Supplemental RI prepared by Roy F. Weston in 1992.

The floodplain delineations shown in the FFS (Figure 5) are based on updated information. The New Jersey Flood Hazard Zone is assumed to be the 500-year flood limit. The majority of the area proposed to be graded and all of the area containing lead-impacted wastes lie outside of these flood zones. There are no significant changes from the earlier assessment. Note that most construction restrictions apply to the floodway and not the floodplain. The conceptual design contours for both Alternatives 1 and 2 were developed to comply with general floodplain and floodway restrictions with no increase in base elevation within the floodway. In addition, the contours were designed to also prevent an increase in base elevation in the floodplain, even though this is generally not a requirement.

Summary

- ☐ Floodplain and floodway issues were not evaluated in detail within the FFS because all of the area containing lead-impacted wastes lies outside of the New Jersey Flood Hazard Zone.

Requested Clarification

- ☐ We request EPA provide feedback if necessary, regarding the above discussion.

IV.6.5 Endangered Species

Discussion

LEC agrees that swamp pink is not present on the site and adjacent wetlands but does not have a copy of the habitat survey report referred to in the last paragraph of the comment letter.

Requested Clarification- None

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V CLOSING REMARKS

LEC would like to determine the next steps, and schedule for RAWP submittal, and the regulatory review and comment period.